Through the introduction of a protective layer between the active side of the wafer and the assembly carrier, air pockets occur which cause unevenness on the rear side of the wafer. These air pockets can scarcely be eliminated by increasing the compressive force or distributing the local pressure locations. Repeating the pressing process several times also does not achieve the desired result. Moreover, the danger of breaking the wafer is increased in an uncontrolled manner by such manipulations.

At Page 6, line 1 through Page 7, line 13:

DESCRIPTION OF PREFERRED EMBODIMENTS

Figures 1 to 4 show four steps of a chronological progression of the method for applying the active side of the substrate or wafer 4 into the protective layer 5. The initial phase of the process is shown in Fig. 1. The feed arm 1 guides the carrying body 2 in a linear movement to the assembly carrier 6, to which the prepared protective layer 5, such as a wax, is applied. The carrying body 2 has a lower portion 8 which can have a shape, when viewed from above, of one of circular, oval and polygonal. The carrying body 2 has on its lower portion 8 one or a plurality of preferably central open ducts, each of which is supplied with excess pressure by a pressure medium, such as air or another fluid. Groove-shaped flow apertures 3, 7, through which the medium is extracted, are attached in an arc on the periphery of the lower portion 8. This negative pressure in the initial phase holds and fixes the wafer

4 at the edges of its rear side. As soon as sufficient retention force is achieved by suction, overpressure is actuated concentrically via the flow apertures 3, 7. This overpressure causes the wafer 4 to arch outwards but does not exceed the retention force through the effect of suction on the edge of the wafer 4. The wafer 4 is thus changed in its spatial shape but is still fixed centrally. In this static state, the wafer 4 is gradually moved towards the assembly carrier 6 with the protective layer 5.

B2

Fig. 2 shows that the wafer 4 has reached its destination, the protective layer 5. This phase is detected by a corresponding sensor analysis and the feeding speed is reduced so that the protruding portion of the arched wafer 4 positively contacts the protective layer 5 but no significant deformations arise from immersion.

Fig. 3 shows a correlation between recovery of the arched wafer 4 and the remaining supply path and how it takes place. The excess pressure in the flow aperture is taken back, the wafer 4 returns to its original shape and simultaneously, through further advance via the feed arm 1, a practically constant contact pressure between the active side of the wafer 4 and the protective layer 5 is provided. During a phase of reforming the wafer 4, the surface of the wafer 4 unrolls uniformly from the central set-down point towards the edges and, as it thus spreads, systematically pushes air bubbles in front of it towards the edge.